

Grid Processing Status

- R09.05.04 (pass4d3) was tagged to redo Geant (with new e,gamma, hadron thresholds)
 - MC Geant done for NuMI - 2,006 subruns
 - 6,332 Subruns of thin target done (~50%)
- R09.05.29 (pass4e) tagged for digitizing+reconstructing MC
- NuMI MC digireco in progress
 - 1,353 Subruns processed thus far
 - 33 Failures with exit code = 134 -- for e.g. in 20014574.30:

```
< *** glibc detected *** corrupted double-linked list: 0x003e8878 *** >
```
 - Not sure if the failures are related to the following messages I see in the logs (seeing typically ~15-20 such messages per 5k subrun file)
 - Job assertion '(x == 0 || isnormal(x)) && (y == 0 || isnormal(y)) && (z == 0 || isnormal(z)) && (px == 0 || isnormal(px)) && (py == 0 || isnormal(py)) && (pz == 0 || isnormal(pz)) && pz >= 0' failed: | Invalid RBKTrack parameters! | in /usr/local/mipp/packages/RecoBase/V09-05-29/RBKTrack.cxx:852 | - Run 20014574 event 1338: mippmc20014574.000032.root
- Had also initially processed ~100 subruns of thin target at 120 and 58 GeV
 - ~50% of 58 GeV thin target MC digireco failed
 - Points to MCCHit::Ptot() in TPCDigitizer (
#9 <signal handler called>
#10 0x559eb8aa in MCCHit::Ptot ()
from /grid/app/mipp/R09.05.29_Linux2.6/mippsoft/lib/Linux2.6-GCC/libMCClasses.so
#11 0x586beb8f in TPCDigitizer::Reco ()
from /grid/app/mipp/R09.05.29_Linux2.6/mippsoft/lib/Linux2.6-GCC/libTPCDigitizer.so
#12 0x55936ale in JobCNode::Exec ()
from /grid/app/mipp/R09.05.29_Linux2.6/mippsoft/lib/Linux2.6-GCC/libJobControl.so
 - Tried debugging with gdb & prints. Seems to suggest it dies on getting to line 241 of TPCDigitizer.cxx:
.... while (tpchit[itrk]->Ptot() < 0.2 || tpchit[itrk]->Ptot() > 0.5) {....

Grid Processing Status...

- Event-numbering in the MC has changed
 - This is in the geant stage where event header is set in E907MCInterface/MCInterface.cxx -- change made by HM, June '08 to use the event number in the stdhep file.
 - Affects all MC geant/dst since pass4b
 - So...*be warned* in the MC DSTs, evt→evtnum is *NOT* in sequence...makes it difficult to skip events when you are trying to debug a crash. I suggest adding a sequential counter in the DST to keep track of *event_number_in_the_file*
- NuMI MC digireco should be done within the next 2 days.
- Will then go back to finishing up Geant for thin targets, and then do the digireco
 - *Digitizer crashes in 58 GeV data need to get fixed*
- LH2 Stdhep files have to be regenerated with the correct target geometry (have to check with HM if he has finished this) - will then redo Geant and Digireco.